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polyesteramides, polyorthoesters, polydioxanones, polyacetals, polyketals, polycarbonates, polyorthocarbonates, polyphosphazenes, polyhydroxybutyrates, polyhydroxyvalerates, polyalkylene oxalates, polyethylene oxides, polyacrylates/methacrylates, polyalkylene succinates, poly(malic acid) polymers, polymaleic anhydrides, poly(methylvinyl)ethers, poly(amino acids), chitin, chitosan, and copolymers, terpolymers, or combinations or mixtures thereof.

23. The method of claim 1 wherein the first and second thermoplastic polymeric matrices comprise a bioactive filler, wherein the bioactive filler comprises bioglass, calcium phosphate, Portland cement, hydroxyapatite, tricalcium phosphate, a di- or polyphosphonic acid, an anti-estrogen, a sodium fluoride preparation, a substance having a phosphate to calcium ratio similar to natural bone, or mixtures thereof.

24. The method of claim 1 wherein the first and second thermoplastic polymeric matrices comprise a bioactive filler, wherein the bioactive filler comprises bone chips, bone crystals, mineral fractions of bone or teeth, or mixtures thereof.

25. The method of claim 1 wherein the first and second thermoplastic polymeric matrices comprise a bioactive filler, wherein the bioactive filler comprises particulate or fibrous filler in nanosize, microsize, macrosized form, or mixtures thereof.

26. The method of claim 1 wherein the filling material further comprises up to about 40 percent by weight of a plasticizer.

27. The method of claim 26 wherein root canal wherein the plasticizer comprises polyol, polyolefin or a mixture thereof.

28. The method of claim 1 wherein filling material further comprises an adhesive.

29. The method of claim 28 wherein the adhesive comprises acrylate, methacrylate, or a mixture thereof.

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30. The method of claim 1 wherein filling material further comprises a polymeric resin, filler, pigment, dye, antibiotic, cariostatic, antibacterial, anti-inflammatory, biologically active or therapeutic material.

31. The method of claim 1 further comprising softening the filling material and injecting the filling material through a needle into the canal.

32. The method of claim 1 wherein the sealant comprises an acrylate, methacrylate, epoxy resin or mixtures thereof.

33. The method of claim 2 wherein the etchant is selected from the group comprising an organic acid and an inorganic acid.

34. The method of claim 33 wherein the organic acid comprises amino acid, acrylic acid, maleic acid, citric acid, ethylene diamine tetra acetic acid (EDTA), tartaric acid, itaconic acid, 5-sulfosalicylic acid, propionic, lactic acid, or derivatives or mixtures thereof.

35. The method of claim 33 wherein the inorganic acid comprises phosphoric acid, nitric acid, hydrochloric acid, sulfuric acid, or derivatives or mixtures thereof.

36. The method of claim 5 wherein the bonding agent comprises an acrylate or methacrylate resin.

37. The method of claim 1, wherein the thermoplastic polymer matrix material is biodegradable.

38. The method of claim 1, wherein the thermoplastic polymer matrix material is a polylactide, a polyglycolide, and copolymers thereof.

39. The method of claim 1, wherein the thermoplastic polymer matrix material has a melting temperature of about 70 to about 200° C.

40. The method of claim 1, wherein the first thermoplastic polymer matrix has a melt flow index of about 0.1 to about 4.0 grams per minute at 80° C. and/or 44 psi and the second thermoplastic polymer matrix has a melt flow index of about 4.5 to about 20.0 grams per minute at 80° C. and/or 44 psi.

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